

632 #11



A. Baker
 RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/653,812

DATE: 07/16/2002
 TIME: 14:22:27

Input Set : N:\Crf3\RULE60\09653812.raw
 Output Set: N:\CRF3\07162002\I653812.raw

RECEIVED
 TECH CENTER, 1600/2000
 JUL 19 2002

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: KAZAZIAN JR., HAIG H.
 6 BOEKE, JEF D.
 7 MORAN, JOHN V.
 8 DOMBROSKI, BETH A.

10 (ii) TITLE OF INVENTION: COMPOSITIONS AND METHODS OF USE OF
 11 MAMMALIAN RETROTRANSPOSONS

13 (iii) NUMBER OF SEQUENCES: 137

15 (iv) CORRESPONDENCE ADDRESS:

16 (A) ADDRESSEE: PANITCH SCHWARZE JACOBS & NADEL, P.C.
 17 (B) STREET: ONE COMMERCE SQUARE, 2005 MARKET STREET, 22ND FL.
 18 (C) CITY: PHILADELPHIA
 19 (D) STATE: PA
 20 (E) COUNTRY: U.S.A.
 21 (F) ZIP: 19103-7086

23 (v) COMPUTER READABLE FORM:

24 (A) MEDIUM TYPE: Floppy disk
 25 (B) COMPUTER: IBM PC compatible
 26 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 27 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

ENTERED

29 (vi) CURRENT APPLICATION DATA:

C--> 30 (A) APPLICATION NUMBER: US/09/653,812
 C--> 31 (B) FILING DATE: 01-Sep-2000
 32 (C) CLASSIFICATION:

45 (vii) PRIOR APPLICATION DATA:

36 (A) APPLICATION NUMBER: US/08/847,844
 37 (B) FILING DATE: 28-APR-1997
 42 (A) APPLICATION NUMBER: US 08/749,805
 43 (B) FILING DATE: 16-NOV-1996
 46 (A) APPLICATION NUMBER: US 60/006,831
 47 (B) FILING DATE: 16-NOV-1995

49 (viii) ATTORNEY/AGENT INFORMATION:

50 (A) NAME: DOYLE LEARY Ph.D., KATHRYN
 51 (B) REGISTRATION NUMBER: 36,317
 52 (C) REFERENCE/DOCKET NUMBER: 9596-23U2

54 (ix) TELECOMMUNICATION INFORMATION:

55 (A) TELEPHONE: 215-567-2020
 56 (B) TELEFAX: 215-567-2991

59 (2) INFORMATION FOR SEQ ID NO: 1:

61 (i) SEQUENCE CHARACTERISTICS:

62 (A) LENGTH: 14 amino acids
 63 (B) TYPE: amino acid

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64 (C) STRANDEDNESS: single
65 (D) TOPOLOGY: linear
67 (ii) MOLECULE TYPE: protein
72 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
74 Met Val Gln Leu Lys Ile Leu Tyr Trp Asn Val Gly Lys Ser
75 1 5 10
77 (2) INFORMATION FOR SEQ ID NO: 2:
79 (i) SEQUENCE CHARACTERISTICS:
80 (A) LENGTH: 10 amino acids
81 (B) TYPE: amino acid
82 (C) STRANDEDNESS: single
83 (D) TOPOLOGY: linear
85 (ii) MOLECULE TYPE: protein
90 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
92 Tyr Asp Ile Val Ala Ile Gln Glu Pro Gly
93 1 5 10
95 (2) INFORMATION FOR SEQ ID NO: 3:
97 (i) SEQUENCE CHARACTERISTICS:
98 (A) LENGTH: 10 amino acids
99 (B) TYPE: amino acid
100 (C) STRANDEDNESS: single
101 (D) TOPOLOGY: linear
103 (ii) MOLECULE TYPE: protein
108 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
110 Lys Gly Arg Ala Val Ile Tyr Val Asn Lys
111 1 5 10
113 (2) INFORMATION FOR SEQ ID NO: 4:
115 (i) SEQUENCE CHARACTERISTICS:
116 (A) LENGTH: 13 amino acids
117 (B) TYPE: amino acid
118 (C) STRANDEDNESS: single
119 (D) TOPOLOGY: linear
121 (ii) MOLECULE TYPE: protein
126 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
128 Pro Thr Thr Val Tyr Ser Ile Tyr Ser Pro Ile Leu Thr
129 1 5 10
131 (2) INFORMATION FOR SEQ ID NO: 5:
133 (i) SEQUENCE CHARACTERISTICS:
134 (A) LENGTH: 16 amino acids
135 (B) TYPE: amino acid
136 (C) STRANDEDNESS: single
137 (D) TOPOLOGY: linear
139 (ii) MOLECULE TYPE: protein
144 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
146 Asn Leu Val Ala Val Gly Asp Leu Asn Leu His His Pro Asp Trp Asp
147 1 5 10 15
150 (2) INFORMATION FOR SEQ ID NO: 6:
152 (i) SEQUENCE CHARACTERISTICS:
153 (A) LENGTH: 24 amino acids

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154 (B) TYPE: amino acid
155 (C) STRANDEDNESS: single
156 (D) TOPOLOGY: linear
158 (ii) MOLECULE TYPE: protein
163 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
165 Gly Glu Pro Thr Arg Leu Gly Asn Ala Thr Arg Gly Glu Arg Asp Gly
166 1 5 10 15
168 Thr Ile Asp His Ala Trp Leu Ser
169 20
171 (2) INFORMATION FOR SEQ ID NO: 7:
173 (i) SEQUENCE CHARACTERISTICS:
174 (A) LENGTH: 13 amino acids
175 (B) TYPE: amino acid
176 (C) STRANDEDNESS: single
177 (D) TOPOLOGY: linear
179 (ii) MOLECULE TYPE: protein
184 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
186 Gly Ser Asp His Cys Pro Gln Glu Ile Trp Val Gln Val
187 1 5 10
189 (2) INFORMATION FOR SEQ ID NO: 8:
191 (i) SEQUENCE CHARACTERISTICS:
192 (A) LENGTH: 19 amino acids
193 (B) TYPE: amino acid
194 (C) STRANDEDNESS: single
195 (D) TOPOLOGY: linear
197 (ii) MOLECULE TYPE: protein
202 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
204 Asp Ile Glu Gln Asn Pro Gly Pro Ile Ala Val Leu Gln Met Asn Val
205 1 5 10 15
207 Ser Cys Leu
210 (2) INFORMATION FOR SEQ ID NO: 9:
212 (i) SEQUENCE CHARACTERISTICS:
213 (A) LENGTH: 10 amino acids
214 (B) TYPE: amino acid
215 (C) STRANDEDNESS: single
216 (D) TOPOLOGY: linear
218 (ii) MOLECULE TYPE: protein
223 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
225 Ala Asp Ile Ile Ala Ile Gln Glu Thr Trp
226 1 5 10
228 (2) INFORMATION FOR SEQ ID NO: 10:
230 (i) SEQUENCE CHARACTERISTICS:
231 (A) LENGTH: 10 amino acids
232 (B) TYPE: amino acid
233 (C) STRANDEDNESS: single
234 (D) TOPOLOGY: linear
236 (ii) MOLECULE TYPE: protein
241 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
243 Gly Gly Val Ala Val Leu Val Arg Lys

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244 1 5 10
246 (2) INFORMATION FOR SEQ ID NO: 11:
248 (i) SEQUENCE CHARACTERISTICS:
249 (A) LENGTH: 13 amino acids
250 (B) TYPE: amino acid
251 (C) STRANDEDNESS: single
252 (D) TOPOLOGY: linear
254 (ii) MOLECULE TYPE: protein
259 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
261 Asp Leu Ile Val Ala Ser Ala Tyr Met Arg Pro Pro Pro
262 1 5 10
264 (2) INFORMATION FOR SEQ ID NO: 12:
266 (i) SEQUENCE CHARACTERISTICS:
267 (A) LENGTH: 16 amino acids
268 (B) TYPE: amino acid
269 (C) STRANDEDNESS: single
270 (D) TOPOLOGY: linear
272 (ii) MOLECULE TYPE: protein
277 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
279 Pro Leu Leu Leu Cys Gly Asp Phe Asn Met His His Pro Gln Trp Glu
280 1 5 10 15
283 (2) INFORMATION FOR SEQ ID NO: 13:
285 (i) SEQUENCE CHARACTERISTICS:
286 (A) LENGTH: 21 amino acids
287 (B) TYPE: amino acid
288 (C) STRANDEDNESS: single
289 (D) TOPOLOGY: linear
291 (ii) MOLECULE TYPE: protein
296 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
298 Gly Glu Ile Thr Thr Ala Arg Gly Thr Arg Glu Arg Ser Cys Ile Asp
299 1 5 10 15
301 Leu Thr Trp Ser Lys
302 20
304 (2) INFORMATION FOR SEQ ID NO: 14:
306 (i) SEQUENCE CHARACTERISTICS:
307 (A) LENGTH: 13 amino acids
308 (B) TYPE: amino acid
309 (C) STRANDEDNESS: single
310 (D) TOPOLOGY: linear
312 (ii) MOLECULE TYPE: protein
317 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
319 Leu Ser Asp His Tyr Val Leu Thr Phe Thr Leu His Gln
320 1 5 10
322 (2) INFORMATION FOR SEQ ID NO: 15:
324 (i) SEQUENCE CHARACTERISTICS:
325 (A) LENGTH: 17 amino acids
326 (B) TYPE: amino acid
327 (C) STRANDEDNESS: single
328 (D) TOPOLOGY: linear

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330 (ii) MOLECULE TYPE: protein
335 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
337 Met Asp Ile Arg Pro Arg Leu Pro Ile Gly Gln Ile Asn Leu Gly Gly
338 1 5 10 15
340 Ala
343 (2) INFORMATION FOR SEQ ID NO: 16:
345 (i) SEQUENCE CHARACTERISTICS:
346 (A) LENGTH: 10 amino acids
347 (B) TYPE: amino acid
348 (C) STRANDEDNESS: single
349 (D) TOPOLOGY: linear
351 (ii) MOLECULE TYPE: protein
356 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
358 Leu Asp Ile Val Leu Val Gln Glu Gln Tyr
359 1 5 10
361 (2) INFORMATION FOR SEQ ID NO: 17:
363 (i) SEQUENCE CHARACTERISTICS:
364 (A) LENGTH: 10 amino acids
365 (B) TYPE: amino acid
366 (C) STRANDEDNESS: single
367 (D) TOPOLOGY: linear
369 (ii) MOLECULE TYPE: protein
374 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
376 Lys Ala Gly Val Tyr Ile Arg Asn Arg Val
377 1 5 10
379 (2) INFORMATION FOR SEQ ID NO: 18:
381 (i) SEQUENCE CHARACTERISTICS:
382 (A) LENGTH: 13 amino acids
383 (B) TYPE: amino acid
384 (C) STRANDEDNESS: single
385 (D) TOPOLOGY: linear
387 (ii) MOLECULE TYPE: protein
392 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
394 Asp Leu Tyr Met Val Ser Ala Tyr Phe Gln Tyr Ser Asp
395 1 5 10
397 (2) INFORMATION FOR SEQ ID NO: 19:
399 (i) SEQUENCE CHARACTERISTICS:
400 (A) LENGTH: 16 amino acids
401 (B) TYPE: amino acid
402 (C) STRANDEDNESS: single
403 (D) TOPOLOGY: linear
405 (ii) MOLECULE TYPE: protein
410 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
412 Arg Val Val Ile Cys Ala Asp Thr Asn Ala His Ser Pro Leu Trp His
413 1 5 10 15
416 (2) INFORMATION FOR SEQ ID NO: 20:
418 (i) SEQUENCE CHARACTERISTICS:
419 (A) LENGTH: 21 amino acids
420 (B) TYPE: amino acid

VERIFICATION SUMMARY
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L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:2556 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:137
L:2559 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:137